# **AC 1405-L**

# High RI, Low Viscosity Dual Cure Adhesive

#### **Features**

- Low viscosity
- Good adhesion to various substrates: glass and plastics
- · Good flow properties
- Flexible
- Optically clear in thin film

# **Description**

High refractive index adhesive

#### **APPLICATIONS**

Optical components applications

#### **TYPICAL PROPERTIES**

Liquid Viscosity (cps, 25 °C) Storage (°C) Shelf life (20 - 25 °C) Pot life (20 - 25 °C)	1,500 to 1,800 15 to 25 1 month 2 weeks
Cured film Shrinkage (linear, %)	< 0.2
Glass transition temperature (°C, DMA)	54.7
Hardness – Shore D	55 - 58
Refractive index of cured film (25°C) @ 589 nm @ 1310 nm @ 1550 nm	1.538 1.524 1.520
Physical properties tested at 25°C, 50% RH (ASTM D63 Elongation (%) Modulus, psi (kgf/mm²)	38) 20.0 58,571 (41)
Coefficient of thermal expansion (TMA), 75 μm film below Tg (x10 <sup>-6</sup> ), °C <sup>-1</sup> above Tg (x10 <sup>-6</sup> ), °C <sup>-1</sup>	37 83
UV curing conditions <u>Spot cure system – UV dose (J/cm²),air</u> 250 – 450 nm filter	3.0 to 5.0

Phone: +1 312 494 9658 Fax: +1 312 494 9687

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# Thermal curing conditions (between 2 substrates or in nitrogen)

Flood cure system – UV dose (J/cm²), nitrogen

75 °C	-			120 to 180 minutes
80 °C				90 to 120 minutes
85 °C				60 to 90 minutes
If thermal	curing is the only	v curing method.	the material is re-	guired to be placed

0.6 to 1.0

If thermal curing is the only curing method, the material is required to be placed between two substrates or to be cured under nitrogen to obtain a fully cured film

- \* Minimum intensity recommended for Spot lamp system: 50 mW/cm<sup>2</sup>
- \*\* Intensity recommended for Flood lamp system: 49 WPcm or 125 WPI or 50 mW/cm<sup>2</sup>

# **SAFETY AND HANDLING**

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution.

Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves** and safety goggles. Read <u>Material Safety Data Sheet</u> before handling.

The information presented here represents our best available information and does not constitute any guarantee or warranty. It is our responsibility to manufacture quality products that meet our published typical specifications and to package them in appropriate containers. Our responsibility is limited to the replacement of any materials found to be defective or not in compliance with our published specifications. Compatibility with specific substrates or applications must be evaluated by the user